# EXHIBIT E

FILED UNDER SEAL

VALIDITY OF
SONOS'S '885 AND '966 PATENTS

Zone Scenes Validity – Overview

➢ Sonos's "zone scene" technology was developed to improve upon Sonos's existing ad-hoc grouping technology

➢ Google's combination of Sonos's 2005 system + Sonos Forums does not disclose or suggest the claimed "zone scene" technology

➢ Google cannot show a motivation to combine or a reasonable expectation of success

➢ Google's combination of Sonos's 2005 system + Sonos Forums does not enable the claimed "zone scene" technology

➢ There is objective evidence establishing that the claimed "zone scene" technology is non-obvious

Sonos's Networked Multi-Zone Audio System
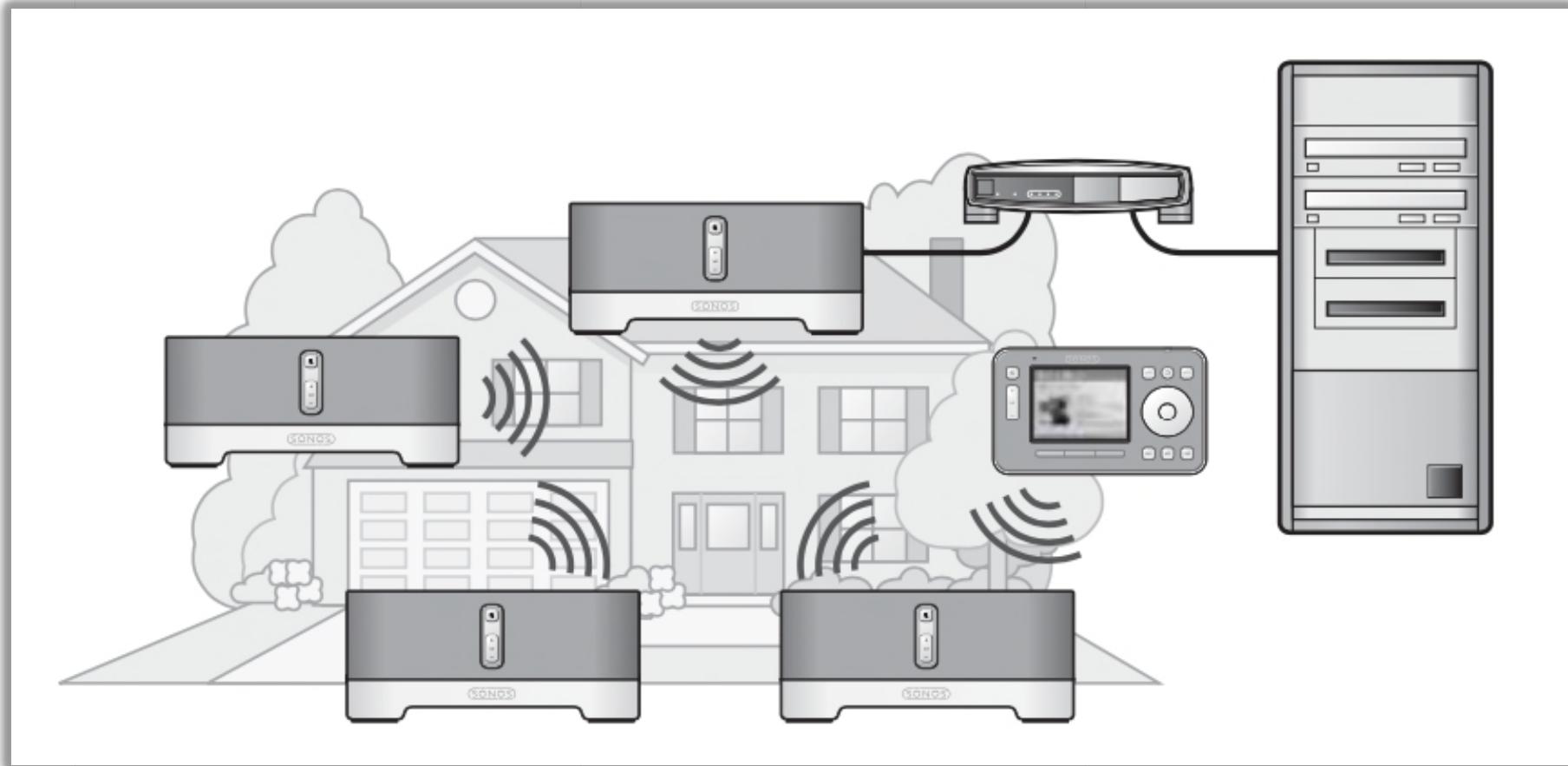
Sonos Digital Music System User Guide at 1-2
April 2005

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Sonos's Ad-Hoc Grouping Technology

Zone groups

Two or more zones can be grouped together to form a zone group, which allows you to play the same music across zones. You can also link all the ZonePlayers in your house with one touch by selecting **All Zones-Party Mode**. You can add and drop zones from a zone group while your music is playing.

To add a zone to a zone group

1. Touch the **Zones** button on your Controller.

2. Highlight the zone or zone group you want to add a zone to, and touch **Link Zone**.

3. Highlight the zone you want to add to the group, and touch **OK**. If you want to join all the zones in your house to this music queue, select **All Zones-Party Mode**. All of your ZonePlayers will then play the same music until you drop the zones from the zone group.

Sonos Digital Music System User Guide at 5-8
April 2005
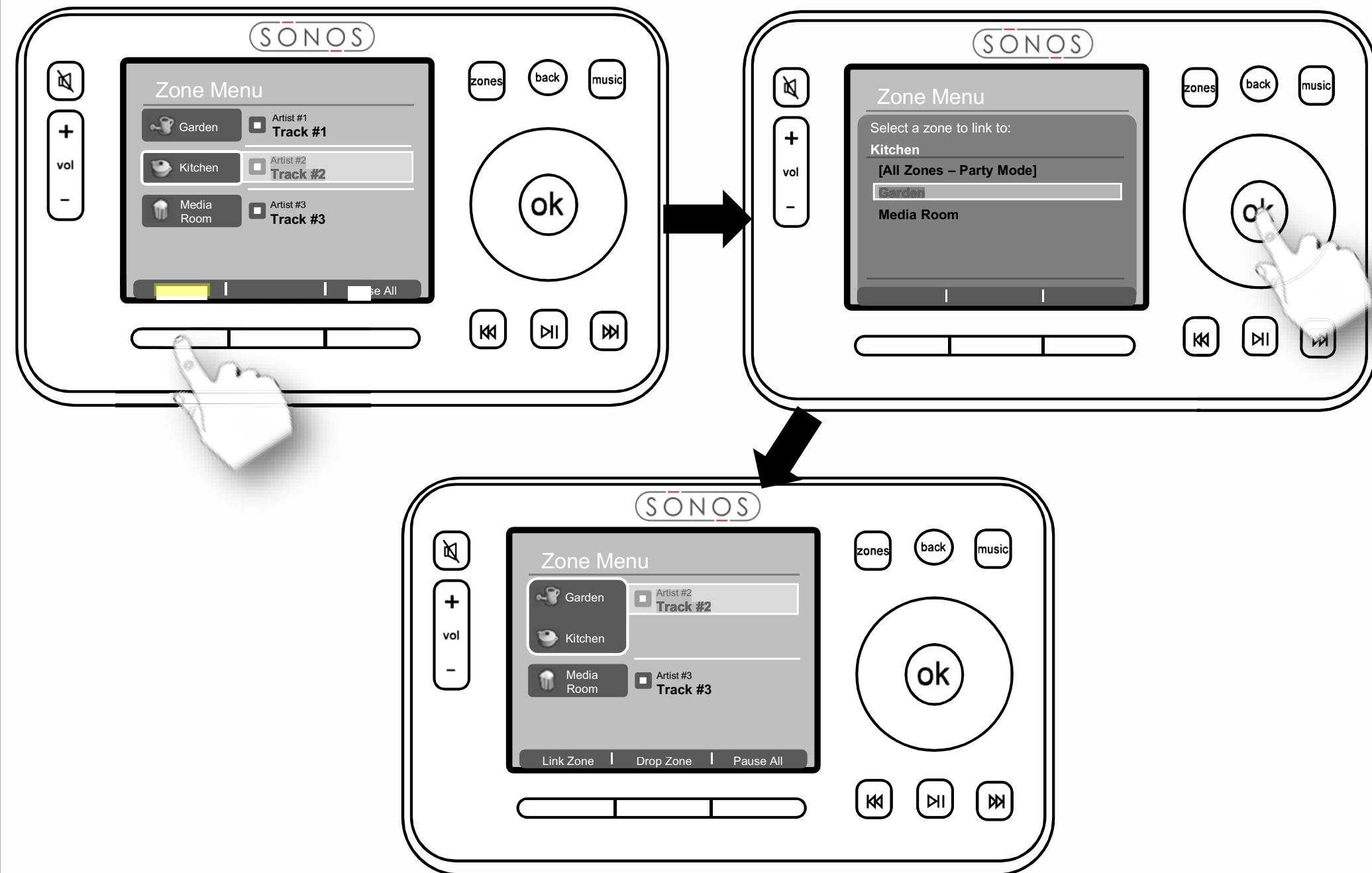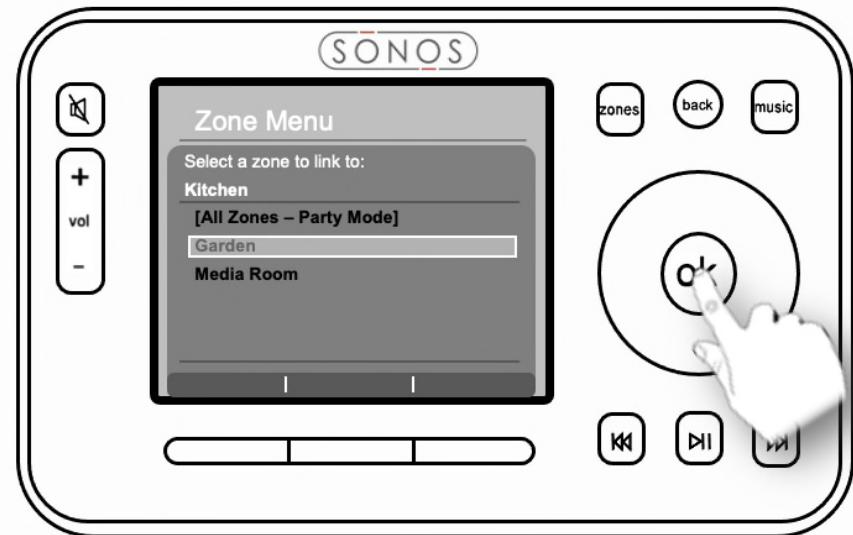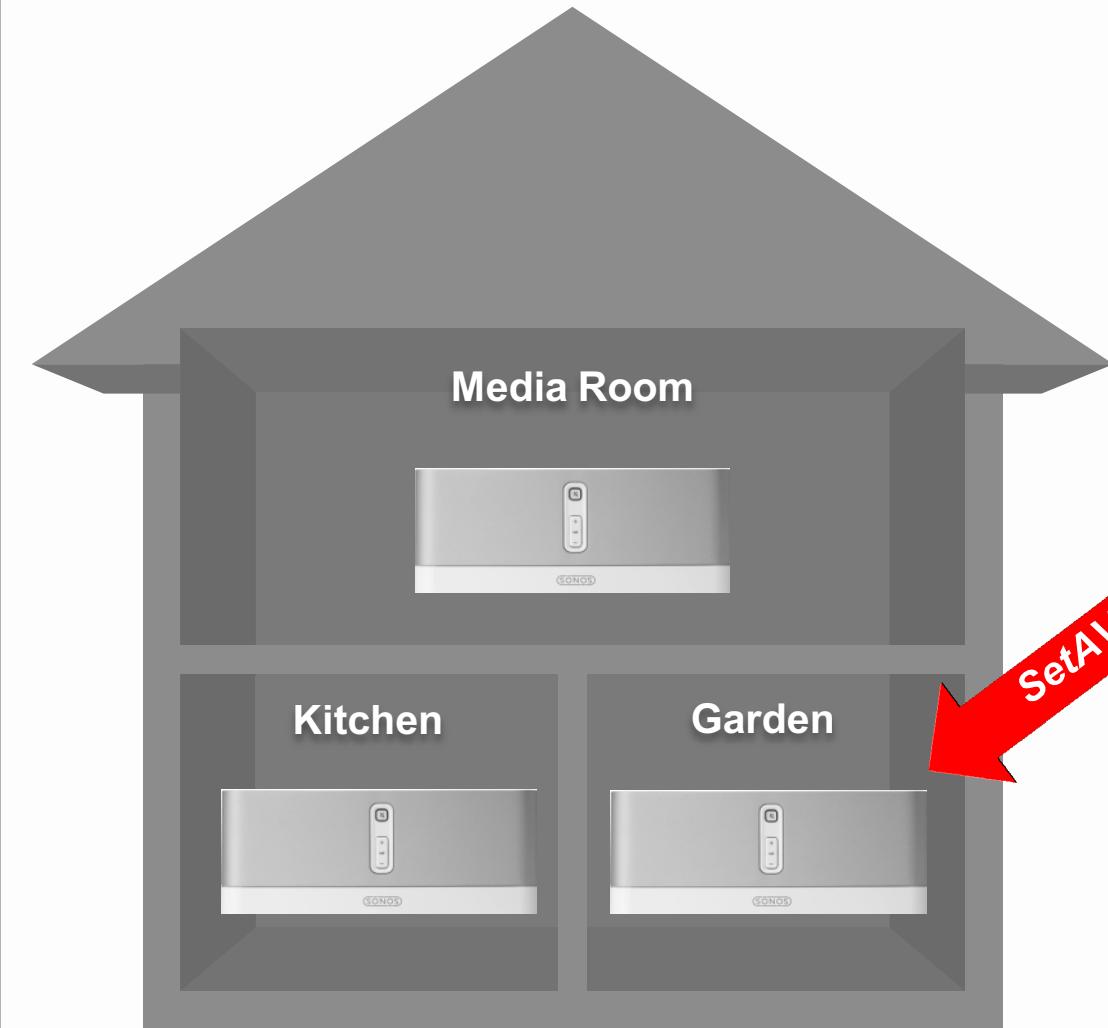
4

Sonos's Ad-Hoc Grouping Technology

Sonos's Ad-Hoc Grouping Technology

Media Room

Kitchen

Garden

SetAVTransportURI message

Zone Menu

Select a zone to link to:
Kitchen
[All Zones – Party Mode]
Garden
Media Room

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Sonos's Ad-Hoc Grouping Technology

Media Room
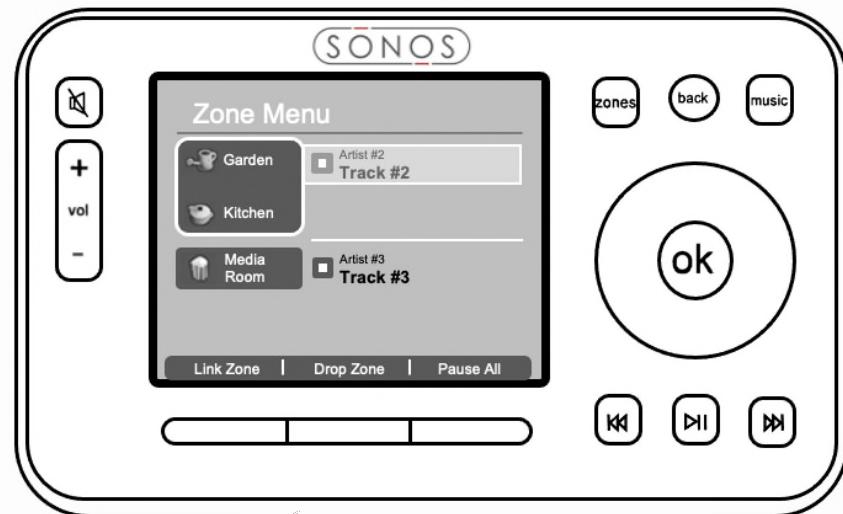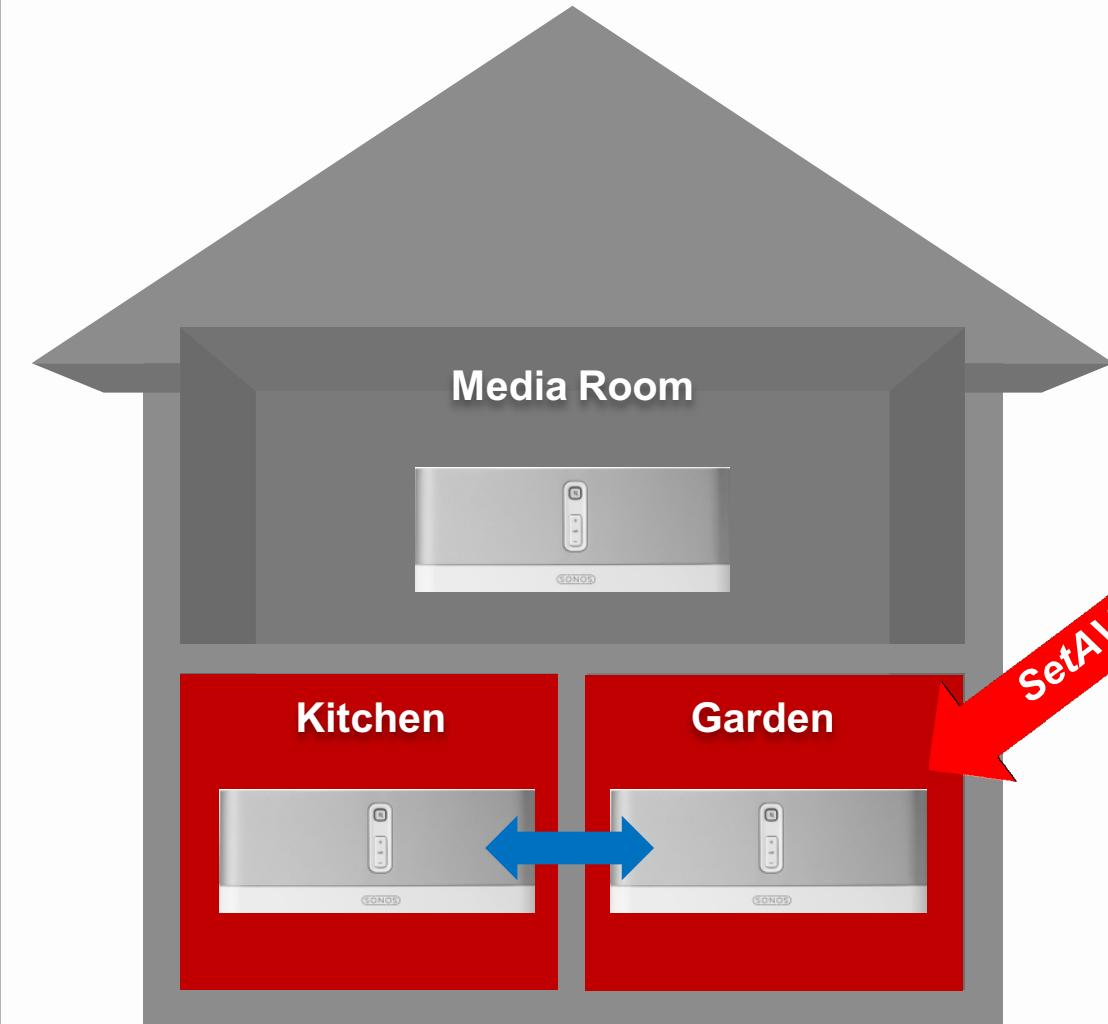
Kitchen

Garden

SetAVTransportURI message

> "Kitchen + Garden" zone group has been automatically activated

> Kitchen and Garden players have transitioned from standalone mode to grouped mode and are configured for synchronous grouped playback

> Kitchen and Garden players can no longer be used for individual playback

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Sonos's Ad-Hoc Grouping Technology

**Sonos's Expert
Dr. Kevin Almeroth**

*1/13/2023
Rebuttal Report
at ¶ 654*
(Sonos Ex. K)

654. . . . As discussed above, Sonos's 2005 system already included ad-hoc "zone group" functionality that allowed ZonePlayers to be grouped together on demand for synchronous playback (albeit in a different way than the claimed "zone scenes" functionality). The evidence I have seen shows that this ad-hoc "zone group" functionality was being praised throughout the industry. *See, e.g.*, GOOG-SONOS-NDCA-00108095 at 365 (disclosing that Sonos's system in 2006 was "pure heaven" and touting that "[y]ou can perform some pretty sophisticated stunts using that remote, like directing different streams of music to different rooms, linking several rooms so that they all play the same music…."); SONOS-SVG2-00234176 at 76-77 (Feb. 3, 2005 PC Magazine article stating Sonos's ZP100 "is the first digital audio hub we can recommend without reservation. . . . It can play the same music throughout the house, perfectly synchronized. Even though that may seem drop-dead simple, other hubs don't do it. And you can join multiple rooms to play the same music . . . on the fly."); SONOS-SVG2-00227422 (March 22, 2005 PC Magazine article stating the same); SONOS-SVG2-00234162 at 62-64 (Feb. 24, 2005 Wall Street Journal article stating "[t]he Sonos system is easily the best music-streaming product I have seen and tested," and "[i]t's the Lexus of the category" at least because "[t]he system works in multiple rooms of a home, allowing you to play . . . the same songs, in each room simultaneously . . . . you can group the 'Zones,' so several receive the same music simultaneously."); SONOS-SVG2-00234165 (listing various "[a]wards, accolades and achievements" by Sonos in 2004-2006); SONOS-SVG2-00234171 (same); SONOS-SVG2-00234181 (2005 Playlist Magazine article stating "[y]ou can control each ZonePlayer independently of the others, or you can sync all of them for full-house entertainment. The result? The music you want, in whatever rooms you want -- the whole-house-music thing done right . . . . Where the Sonos system stands out from similar systems is in its zone management. Using the Controller's Zone menu, you can easily link zones to play the same music in sync . . . ."); SONOS-SVG2-00234182 at 84 (Dec. 2005 LA Audio file article stating "[u]sing the Link Zone feature, users can link some or all of the listening zones to a single group. This is particularly useful when having a party or when one might be moving from one room to another within the house and would like to hear the same music."), at 86 ("Having seen so many options for distributing audio in today's homes, I can't think of a better all-around product than the Sonos Digital Music System.").

Sonos's Ad-Hoc Grouping Technology

"**The Sonos system is designed for the digital music age. . . .[Using the Sonos system] is pure heaven. . . You can perform some pretty sophisticated stunts using that remote, like directing different streams of music to different rooms, linking several rooms so that they all play the same music, adjusting their volume either independently or as a group, and queuing up what music you want to hear next. The Sonos software manages to make all of this simple and visual.**"

GOOG-SONOS-NDCA-00108095 at 364-66

existing music
example, or just sitting in low
home network and a high-speed Internet connection.

In each room, you place a ZonePlayer 80 (ZP80) -- a small cubelike off-
white wireless receiver whose rounded corners make it look like a Mac
Mini with a tan. The $1,000 package includes two such players;
additional rooms require their own players at $350 each, up to a
maximum of 32 a household. (Sorry, Mr. Gates.)

Each player is supposed to connect to a sound system: a stereo, home
theater, boom box, pair of powered speakers, iPod Hi-Fi, or other
device. This requirement differentiates the ZP80 from last year's bigger,
heavier, more expensive ZP100. Each ZP100, which costs $500, also

GOOG-SONOS-NDCA-00108364

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Sonos's Ad-Hoc Grouping Technology
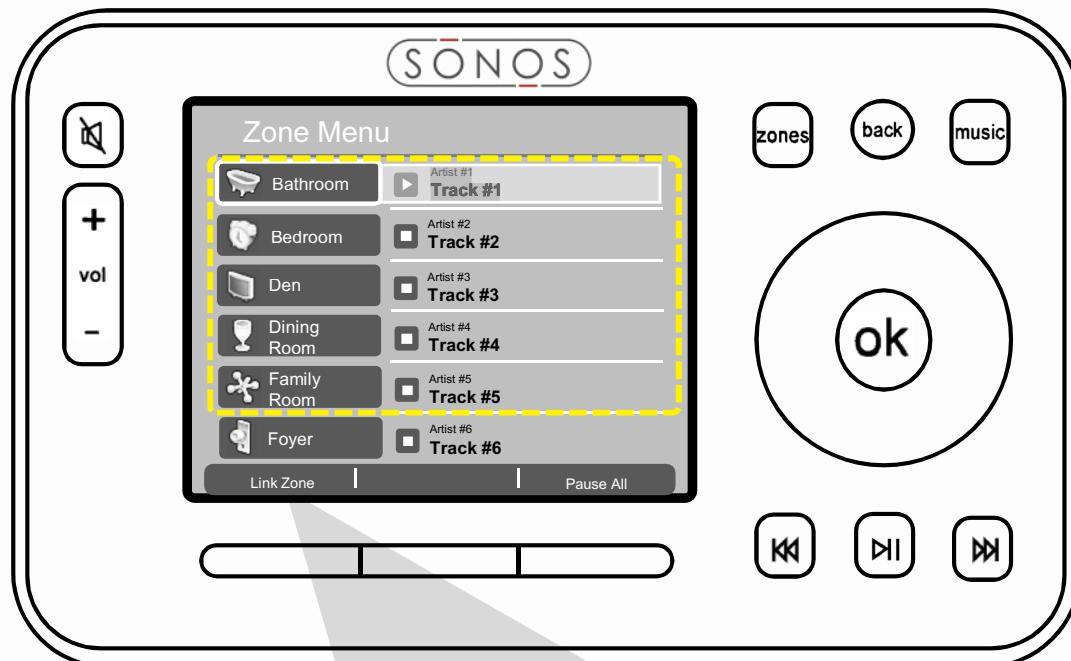
- ➤ Sonos's ad-hoc grouping technology only allowed players to be added to a zone group one-by-one

- ➤ To add each new player to the zone group, the user was required to select the "Link Zone" button, scroll to the desired player (if necessary), and press "ok"

- ➤ Creating a group of 5 players would require to interact with 8 different screens and provide 8-12 different user inputs
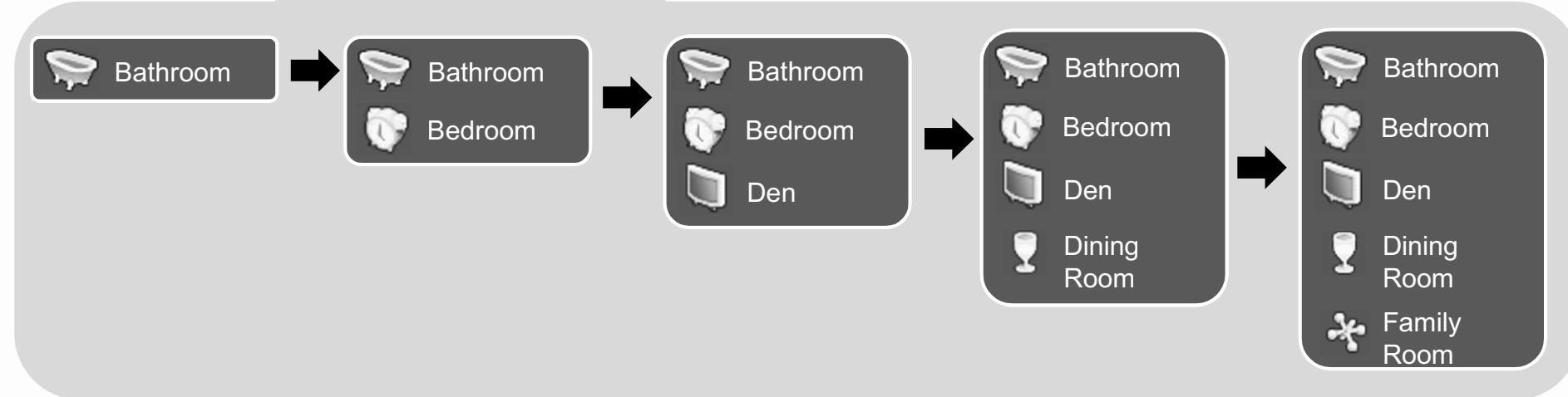
Zone Scenes were Invented to Improve on Ad-Hoc Grouping

SONOS

Rob Lambourne
UX Director

Declaration
(Sonos Ex. A)

8.   After the launch of the initial version of Sonos's networked multi-zone audio system in January 2005, Sonos received a lot of positive feedback on its ad-hoc grouping technology. However, I also recognized that the ad-hoc grouping technology incorporated into the initial version of Sonos's networked multi-zone audio system had certain drawbacks.

9.   For example, I recognized that if a user had an existing "zone group" of Zone Players (say, Kitchen, Living Room, and Bedroom) but wanted to use a given ZonePlayer from that existing "zone group" (say, Kitchen) for individual playback, the only way to accomplish this was by destroying the existing "zone group," at which point the existing "zone group" would cease to exist. In this respect, the only way a user could use a "zone group" having that same group membership again in the future was by re-creating a new temporary, ad-hoc "zone group" that included the same members as the previously-existing "zone group," which would require the user to repeat the ad-hoc process of selecting the ZonePlayers to include in the group one at a time.

10.   As another example, I recognized that if a user had an existing "zone group" of Zone Players (say, Kitchen, Living Room, and Bedroom) but wanted to use a given ZonePlayer from that existing "zone group" (say, Kitchen) in a new "zone group" having different group members, the only way to accomplish this was by pulling the given ZonePlayer out of the existing "zone group" and placing it into the new "zone group," which would destroy the existing "zone group" and it would cease to exist. In this respect, the only way a user could use a "zone group" having that same group membership again in the future was by re-creating a new temporary, ad-hoc "zone group" that included the same members as the previously-existing "zone group," which would also require the user to repeat the ad-hoc process of selecting the ZonePlayers to include in the group one at a time.

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Zone Scenes were Invented to Improve on Ad-Hoc Grouping
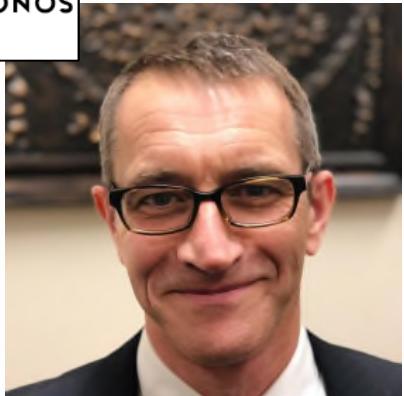
Rob Lambourne
UX Director

Declaration
(Sonos Ex. A)

11.   This process was not efficient in scenarios where a user tended to create and use "zone groups" having the same group membership on multiple different occasions, and it could also become time consuming in scenarios where the groups being created (and re-created) included more than a few ZonePlayers. This was a byproduct of the fact that a "zone group" of ZonePlayers was temporary – it only existed during the limited time that the group was invoked for playback, and as soon as a user wanted to use a member of the group for individual playback (or within a different group), the existing "zone group" would need to be destroyed, as demonstrated by the example scenarios I just described.

12.   As noted above, Sonos's controller interface at the time also included a hard-coded "All Zones-Party Mode" option, but that option only applied to scenarios where a user wished to form a "zone group" comprising all of the ZonePlayers in the user's system – it did not provide users with any ability to customize and pre-save their own predefined groups of ZonePlayers.

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Zone Scenes were Invented to Improve on Ad-Hoc Grouping
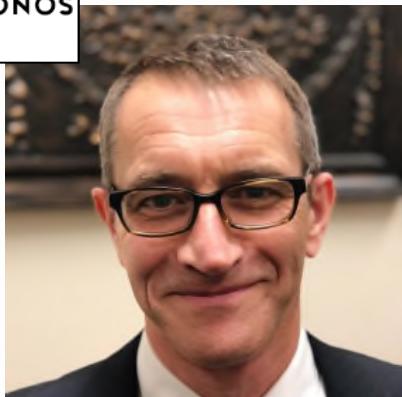
Rob Lambourne
UX Director

Declaration
(Sonos Ex. A)

13.   In view of these drawbacks with Sonos's existing ad-hoc grouping technology, I began to design and develop new technology for grouping ZonePlayers together for synchronous playback that would enable a user to customize and pre-save predefined groupings of ZonePlayers that could later be invoked on demand for synchronous playback, which was not possible with Sonos's networked multi-zone audio system at the time.

15.   As explained in my Sonos UI Specification, the "zone scene" technology I had designed and developed was a new feature that was intended to provide certain advantages over the current ad-hoc grouping technology of Sonos's networked multi-zone audio system at the time. In particular, the "Introduction" section of my Sonos UI Specification explained that the "zone scene" technology would allow a user to avoid the need to "manually link[] zones one at a time until the desired zone grouping is reached" each time a "zone group" was created as was required in Sonos's current system at the time, and would also be "more flexible and powerful" than the hard-coded "All Zones-Party Mode" option that was available in Sonos's current system at the time:

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Zone Scenes were Invented to Improve on Ad-Hoc Grouping

1   Introduction

The Zone Scene feature allows the user to arrange the zones into groups using one single command. This is similar to the current Party Mode setting that is available. However, the Zone Scene feature is much more flexible and powerful.

Currently in the Sonos UI, zone groups are created by manually linking zones one at a time until the desired zone grouping is reached.

For Example

Start with **Living Room**

➢ Link the Kitchen to the Living Room to make a group of (**Living Room + Kitchen**)
➢ Then link the Den to the (**Living Room + Kitchen**) to make a group of (**Living Room + Kitchen + Den**)

The Zone Scene feature would allow the user to create a group of (**Living Room + Kitchen + Den**) with one command.

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Zone Scenes were Invented to Improve on Ad-Hoc Grouping

'885 Patent
FIG. 6

Setup

Invocation

15
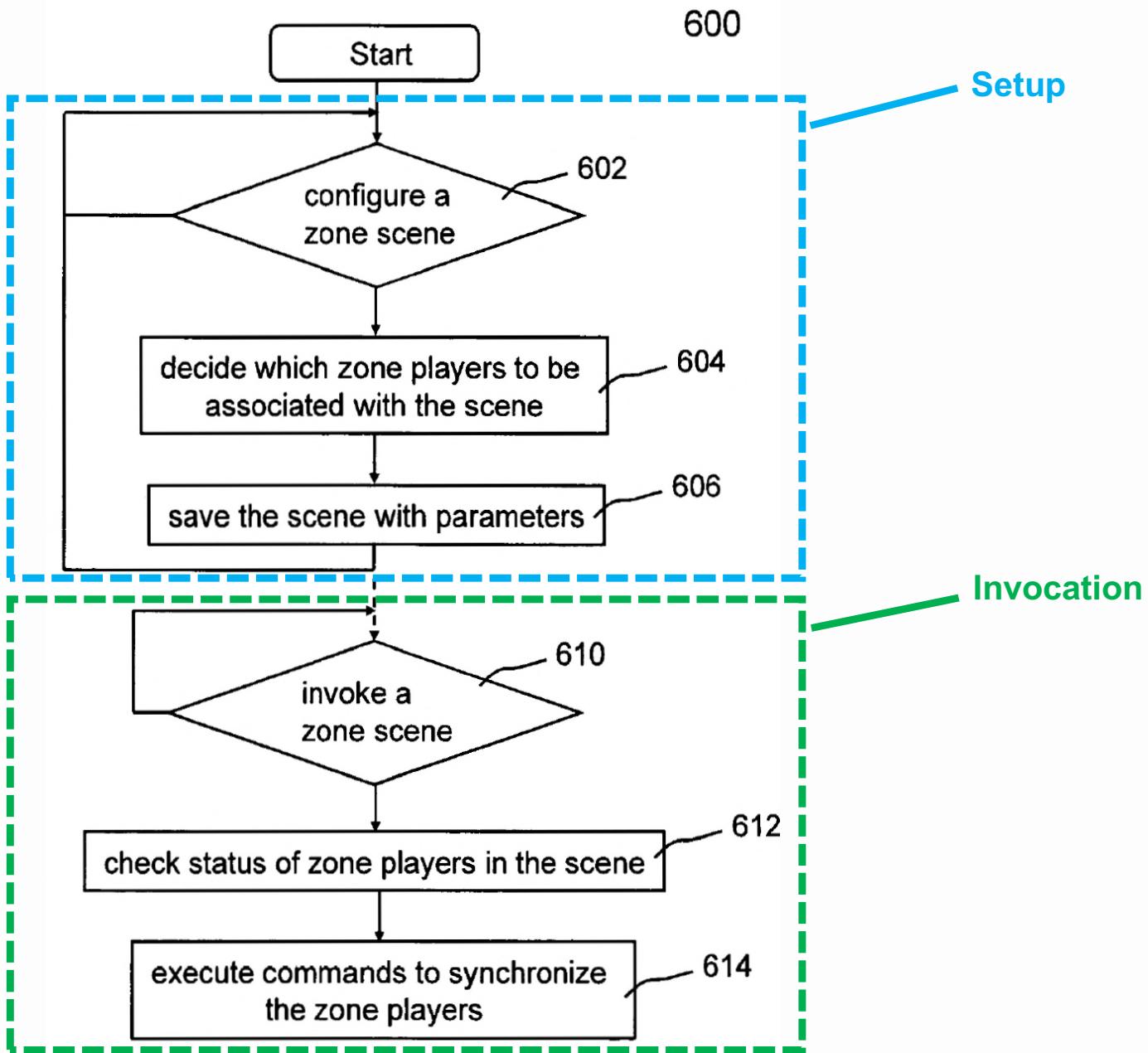
Zone Scenes were Invented to Improve on Ad-Hoc Grouping
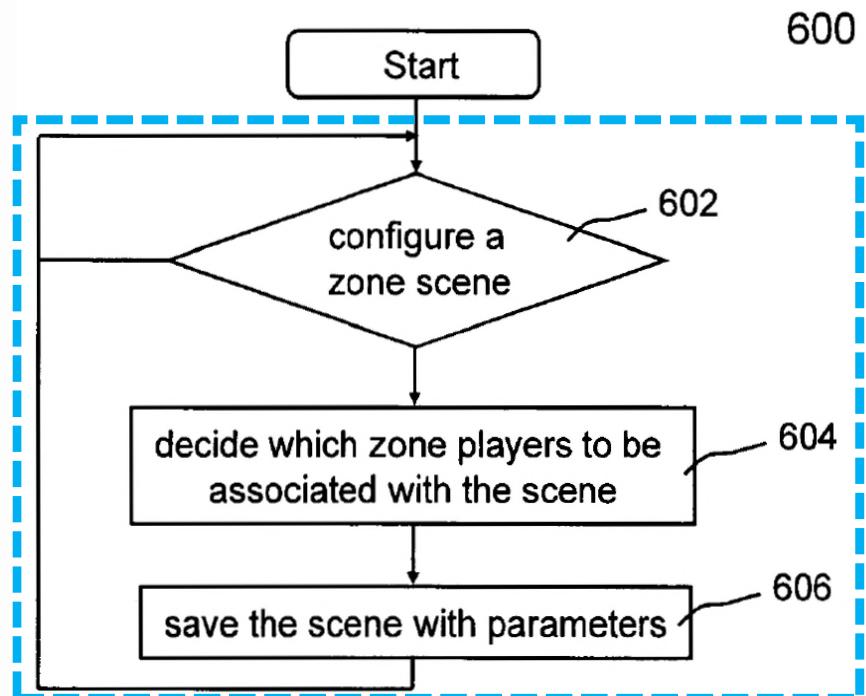
The process **600** is initiated only when a user decides to proceed with a zone scene at **602**. The process **600** then moves to **604** where it allows a user to decide which zone players to be associated with the scene. For example, there are ten players in a household, and the scene is named after "Morning". The user may be given an interface to select four of the ten players to be associated with the scene. At **606**, the scene is saved. The scene may be saved in any one of the members in the scene. In the example of FIG. **1**, the scene is saved in one of the zone players and displayed on the controller **142**. In operation, a set of data pertaining to the scene includes a plurality of parameters. In one embodiment, the parameters include, but may not be limited to, identifiers (e.g., IP address) of the associated players and a playlist. The parameters may also include volume/tone settings for the associated players in the scene. The user may go back to **602** to configure another scene if desired.

'885 Patent at 10:36-52

Zone Scenes were Invented to Improve on Ad-Hoc Grouping
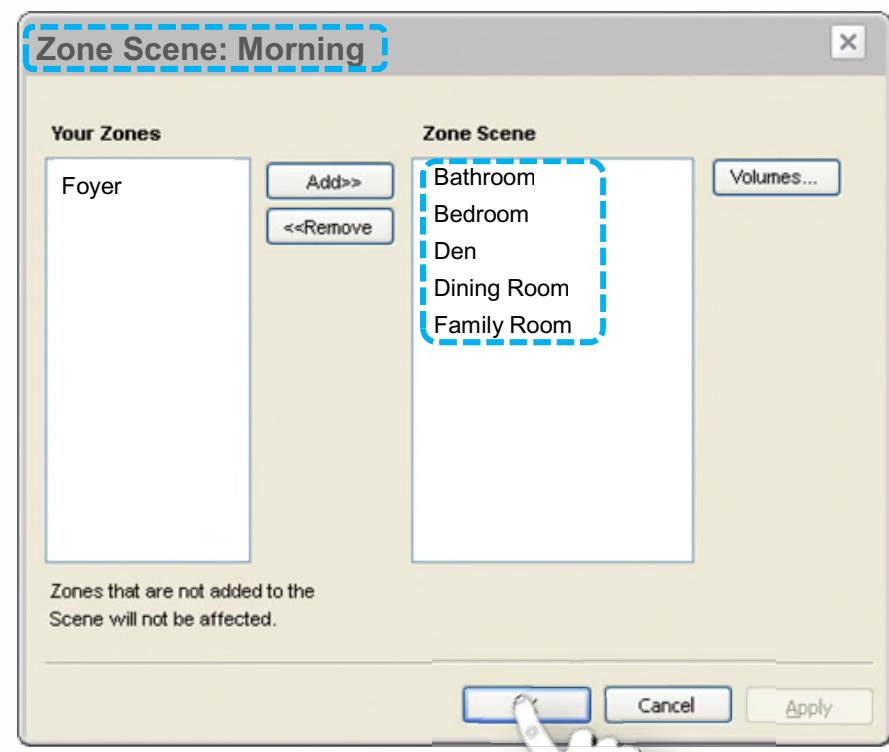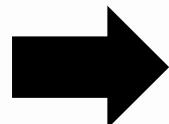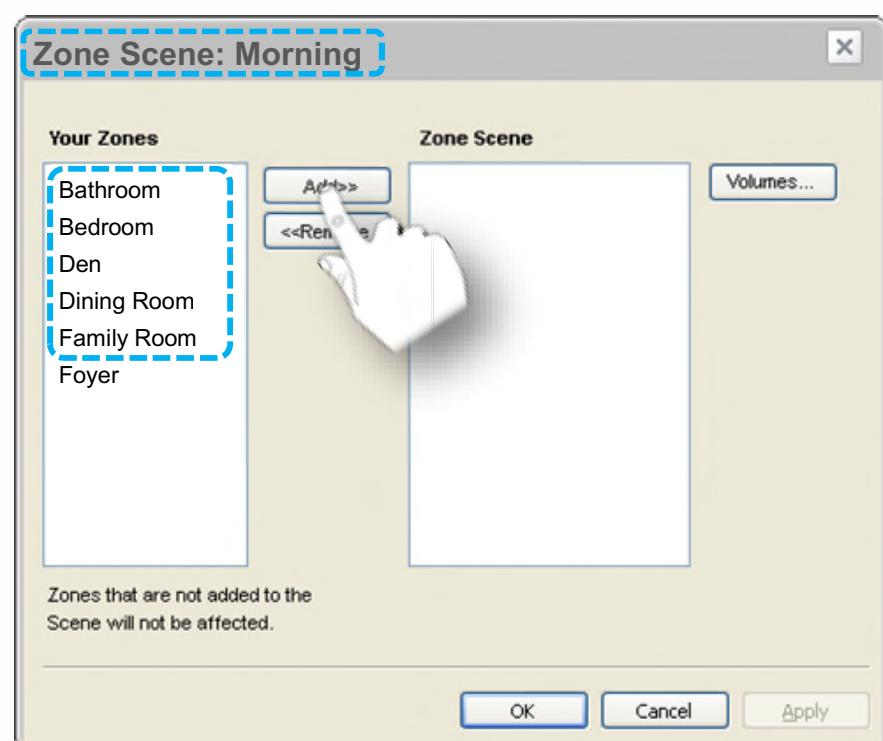
Zone Scenes were Invented to Improve on Ad-Hoc Grouping
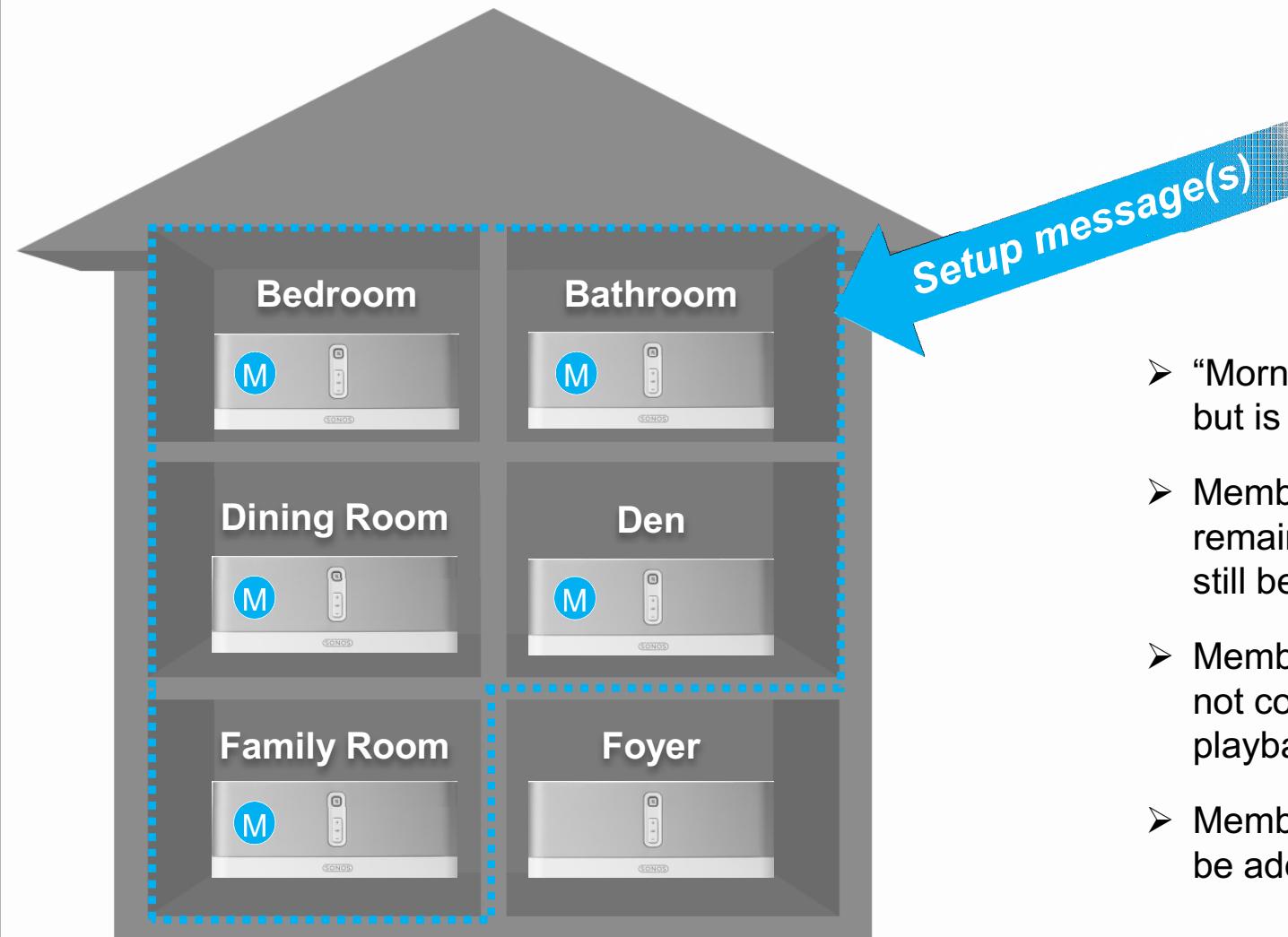
- ➢ "Morning" zone scene has been saved but is not automatically activated

- ➢ Members of "Morning" zone scene have remained in standalone mode and can still be used for individual playback

- ➢ Members of "Morning" zone scene are not configured for synchronous grouped playback

- ➢ Members of "Morning" zone scene can be added to other zone scenes

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Zone Scenes were Invented to Improve on Ad-Hoc Grouping
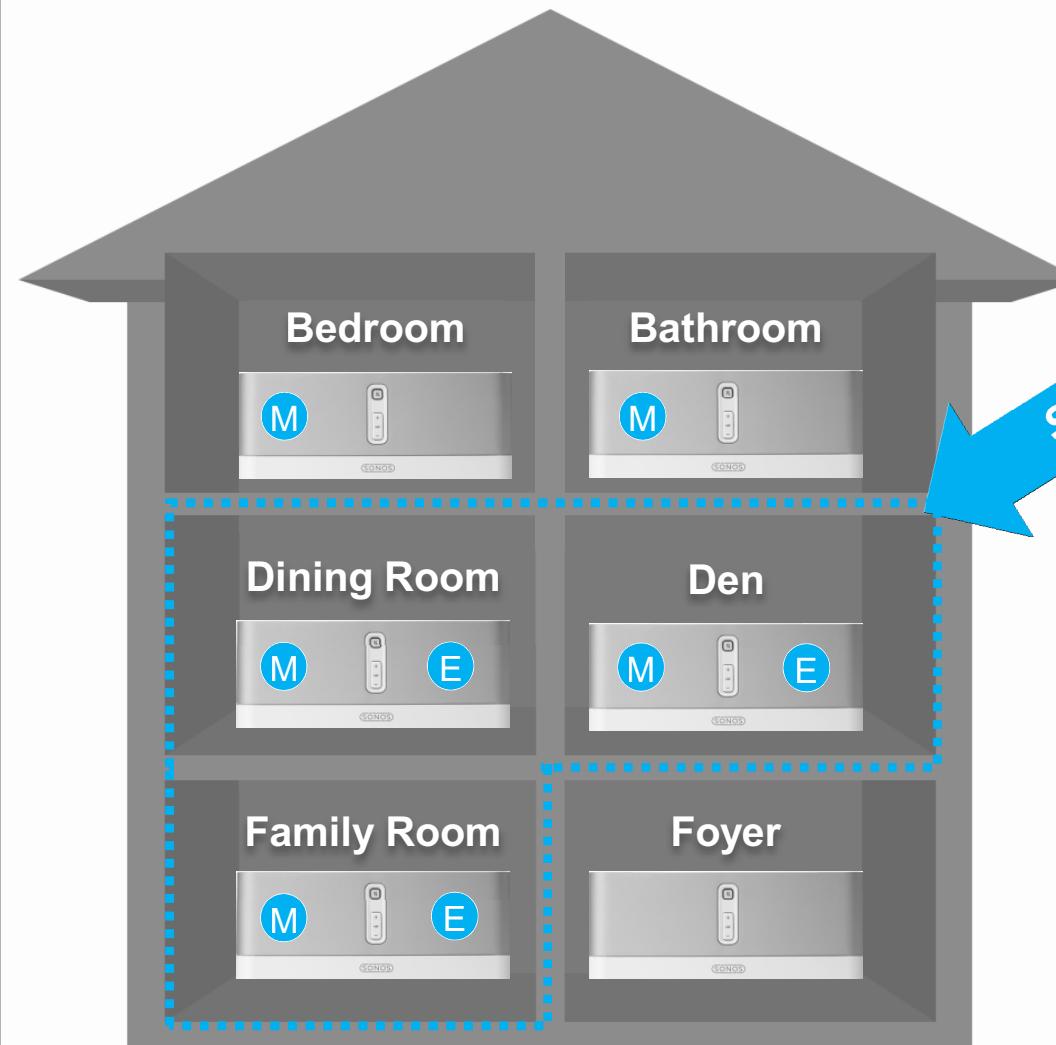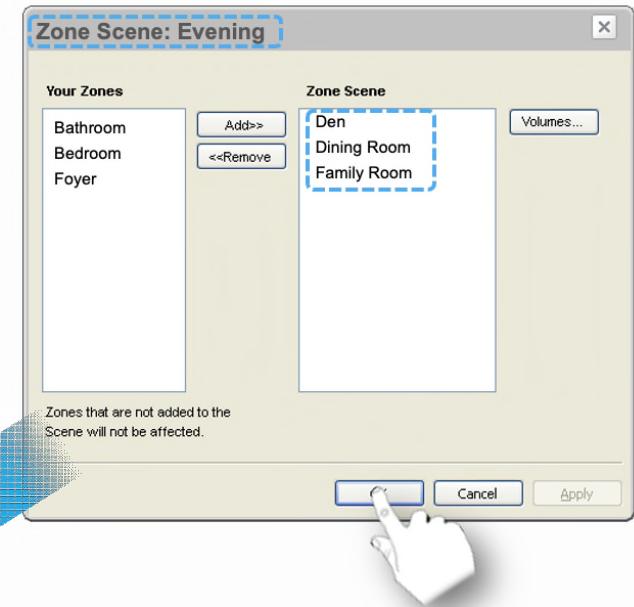
- ➢ "Evening" zone scene has been saved but is not automatically activated

- ➢ Members of "Evening" zone scene have remained in standalone mode and can still be used for individual playback

- ➢ Members of "Evening" zone scene are not automatically configured for synchronous grouped playback

- ➢ Members of "Evening" zone scene can be added to other zone scenes

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Zone Scenes were Invented to Improve on Ad-Hoc Grouping
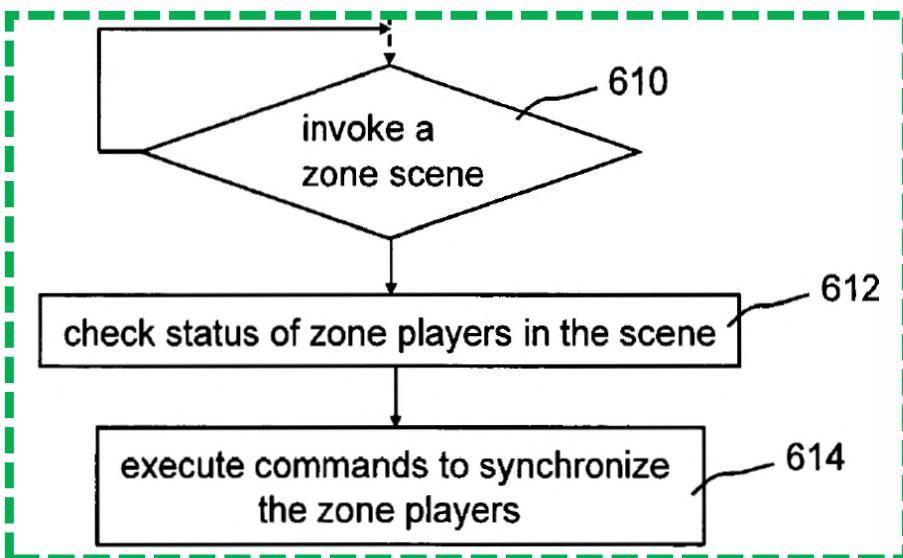
Given a saved scene, a user may activate the scene at any time or set up a timer to activate the scene at **610**. The process **600** can continue when a saved scene is activated at **610**. At **612**, upon the activation of a saved scene, the process **600** checks the status of the players associated with the scene. The status of the players means that each of the players shall be in condition to react in a synchronized manner. In one embodiment, the interconnections of the players are checked to make sure that the players communicate among themselves and/or with a controller if there is such a controller in the scene.

It is assumed that all players associated with the scene are in good condition. At **614**, commands are executed with the parameters (e.g., pertaining to a playlist and volumes). In one embodiment, data including the parameters is transported from a member (e.g., a controller) to other members in the scene so that the players are caused to synchronize an operation configured in the scene. The operation may cause all players to play back a song in identical or different volumes or to play back a pre-stored file.
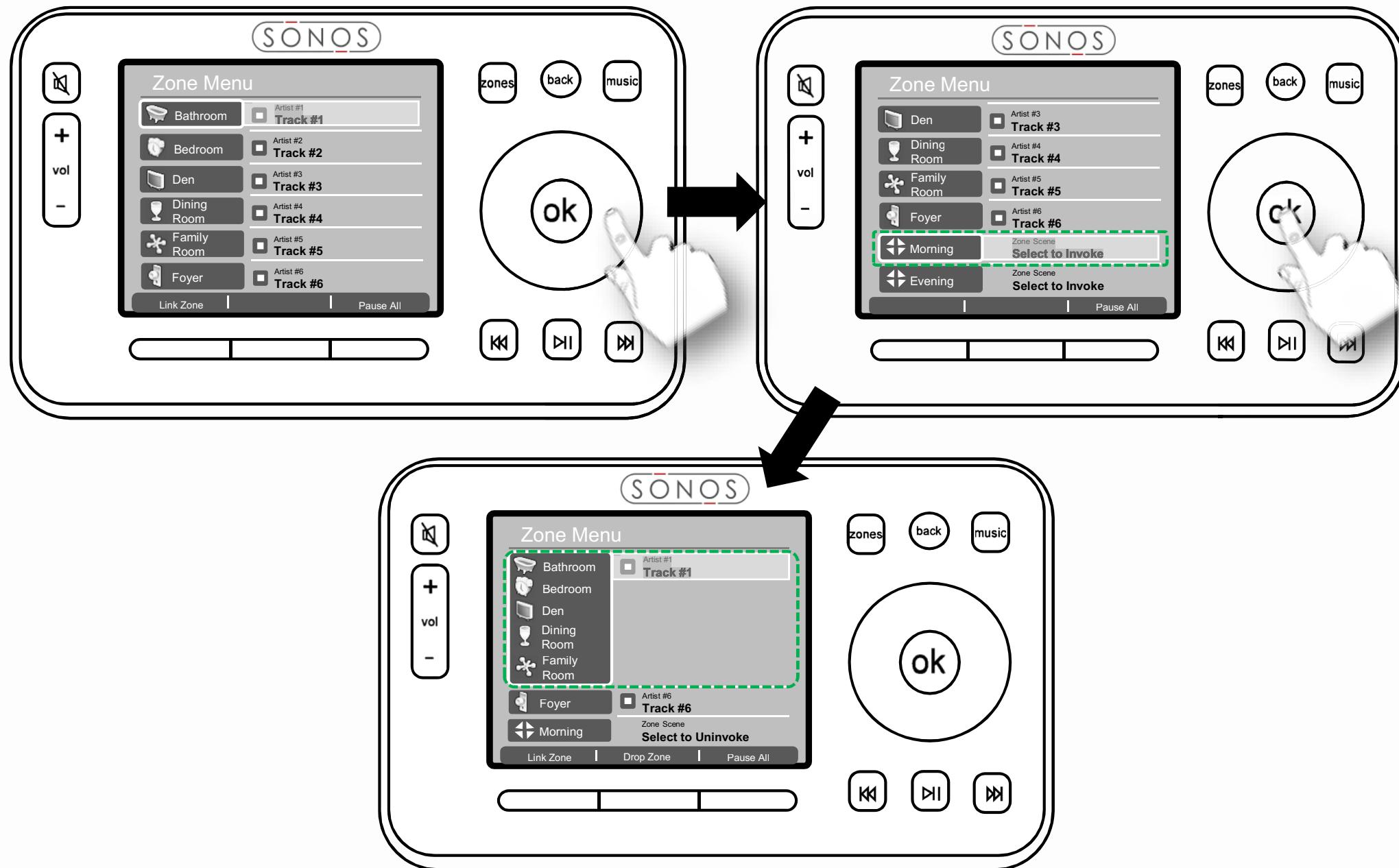
'885 Patent at 10:53-11:5

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Zone Scenes were Invented to Improve on Ad-Hoc Grouping

Zone Scenes were Invented to Improve on Ad-Hoc Grouping
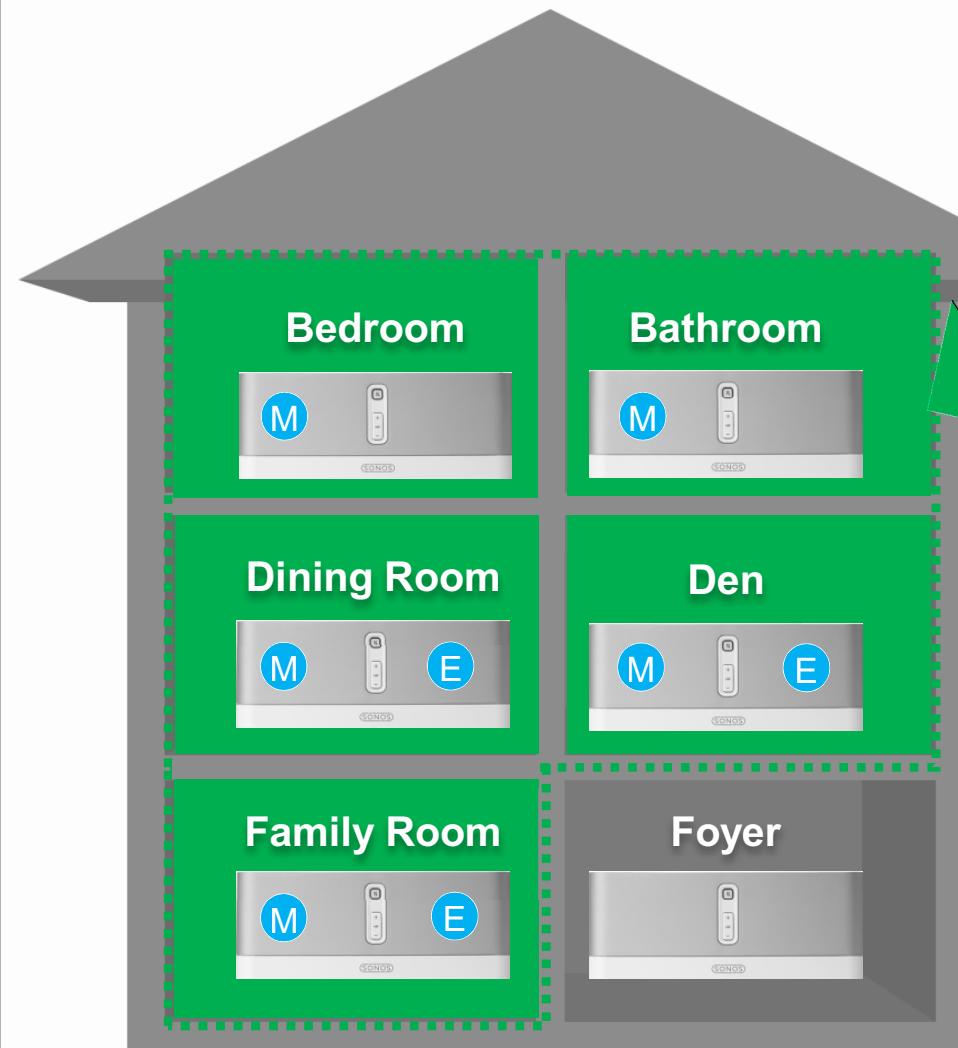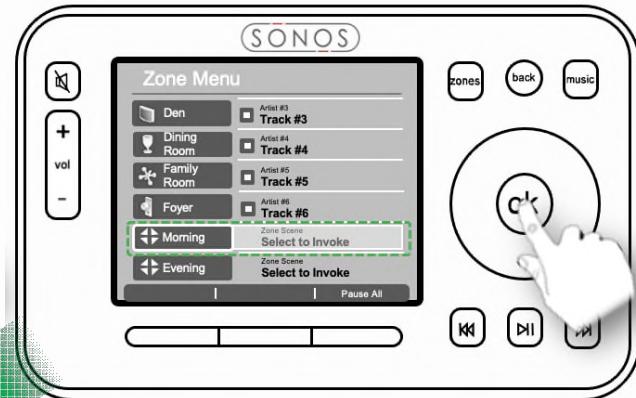
- ➤ User selection of "Morning" scene causes controller to send invocation message to at least one scene member

- ➤ "Morning" scene's predefined group becomes activated

- ➤ Members of invoked "Morning" scene transition from standalone mode to grouped mode

- ➤ Members of invoked "Morning" scene now configured for synchronous grouped playback

- ➤ Members of invoked "Morning" scene still members of "Evening" scene

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'885 Patent, Claim 1

[1.0] A first zone player comprising . . . **[1.4]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

[1.5] while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

[1.6] (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

[1.7] (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

Setup

[1.8] after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

[1.9] after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

Invocation

[1.10] based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

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'966 Patent, Claim 1

[1.0] A computing device comprising . . . **[1.3]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the computing device to perform functions comprising:

[1.4] while serving as a controller for a networked media playback system comprising a first zone player and at least two other zone players, wherein the first zone player is operating in a standalone mode in which the first zone player is configured to play back media individually:

[1.5] receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked;

[1.6] based on the first request, i) causing creation of the first zone scene, ii) causing an indication of the first zone scene to be transmitted to the first zone player, and iii) causing storage of the first zone scene;

Setup

[1.7] receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different than the second zone player;

[1.8] based on the second request, i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene;

[1.9] displaying a representation of the first zone scene and a representation of the second zone scene; and

Invocation

[1.10] while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene; and

[1.11] based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player.

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Zone Scenes were Invented to Improve on Ad-Hoc Grouping

Ad-Hoc Grouping

```
┌─────────────────────────────┐
│  Ad-hoc group of zone       │
│  players is created         │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│  "SetAVTransportURI"        │
│  message is sent to a zone  │
│  player in ad-hoc group     │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│  Zone players in ad-hoc     │
│  group are configured for   │
│  synchronous playback       │
└─────────────────────────────┘
```

Zone Scene Grouping

```
┌──────────────────────────────────────┐
│  Zone scene having predefined group  │
│  of zone players is created          │
└──────────────────────────────────────┘
                  │
                  ▼
┌──────────────────────────────────────┐
│  Indication that a zone player has   │
│  been added to zone scene is sent to │
│  the zone player(s)                  │
└──────────────────────────────────────┘
                  │
                  ▼
┌──────────────────────────────────────┐
│  Zone scene is stored                │
└──────────────────────────────────────┘
```

```
┌──────────────────────────────────────┐
│  Zone scene selected for invocation  │
└──────────────────────────────────────┘
                  │
                  ▼
┌──────────────────────────────────────┐
│  Instruction to operate in accordance│
│  with zone scene is sent to the zone │
│  player(s)                           │
└──────────────────────────────────────┘
                  │
                  ▼
┌──────────────────────────────────────┐
│  Zone players in zone scene are      │
│  configured for synchronous playback │
└──────────────────────────────────────┘
```

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Sonos's 2005 System Did Not Include the Claimed "Zone Scene" Technology

Rob Lambourne
UX Director

Declaration
(Sonos Ex. A)

3.   I began working at Sonos (which was originally called Rincon Networks) in June 2003, and I was a Director of User Experience Design at Sonos from June 2003 to July 2018.

4.   I was a founding member of the UX team at Sonos, and I worked with other developers and engineers (including Nick Millington) to build the initial version of Sonos's networked multi-zone audio system, which was launched commercially in January 2005 under the name "The Sonos Digital Music System."

16.   As confirmed by the April 2005 Sonos User Guide and my Sonos UI Specification (among other documents), Sonos's networked multi-zone audio system at the time did not have any "zone scenes" technology that would enable a user to customize and pre-save a predefined grouping of ZonePlayers that could later be invoked on demand for synchronous playback. This is consistent with my own recollection that Sonos's networked multi-zone audio system at the time did not have any "zone scene" technology.

Sonos's 2005 System Did Not Include the Claimed "Zone Scene" Technology

SONOS

Nick Millington
Chief Innovation Officer

Declaration
(Sonos Ex. B)

3.   I began working at Sonos (which was originally called Rincon Networks) in April 2003, and I was a Director of Software Development at Sonos from June 2003 to October 2006.

4.   I was a founding member of the product team at Sonos, and I worked with other developers and engineers (including Rob Lambourne) to build the initial version of Sonos's networked multi-zone audio system, which was launched commercially in January 2005 under the name "The Sonos Digital Music System."

10.   As confirmed by the April 2005 Sonos User Guide and Mr. Lambourne's Sonos UI Specification (among other documents), Sonos's networked multi-zone audio system at the time did not have any "zone scene" technology that would enable a user to customize and pre-save a predefined grouping of ZonePlayers that could later be invoked on demand for synchronous playback. This is consistent with my own recollection that Sonos's networked multi-zone audio system at the time did not have any "zone scene" technology.

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Sonos's 2005 System Did Not Include the Claimed "Zone Scene" Technology
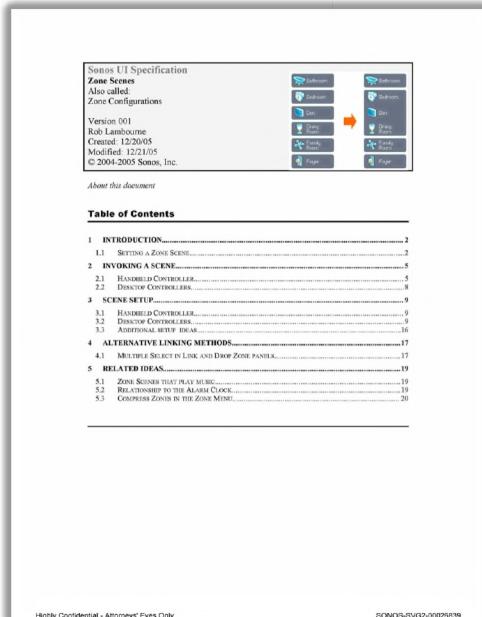
Sonos UI Specification
Zone Scenes
12/21/2005
(Sonos Ex. R)

1   Introduction

The Zone Scene feature allows the user to arrange the zones into groups using one single command. This is similar to the current Party Mode setting that is available. However, the Zone Scene feature is much more flexible and powerful.

Currently in the Sonos UI, zone groups are created by manually linking zones one at a time until the desired zone grouping is reached.

For Example

Start with **Living Room**

➢ Link the Kitchen to the Living Room to make a group of (**Living Room** + **Kitchen**)
➢ Then link the Den to the (**Living Room** + **Kitchen**) to make a group of (**Living Room** + **Kitchen** + **Den**)

The Zone Scene feature would allow the user to create a group of (**Living Room** + **Kitchen** + **Den**) with one command.

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Sonos's 2005 System Did Not Include the Claimed "Zone Scene" Technology

SONOS

**Sonos's Expert
Dr. Kevin Almeroth**

*1/13/2023
Rebuttal Report
at ¶¶ 497-526
(Sonos Ex. K)*

*See also
7/27/2022
Rebuttal Report
at ¶¶ 300-320
(Sonos Ex. I)*

497.   Turning to Sonos's system as it existed in 2005, the evidence I have reviewed establishes that the controller(s) (e.g., a Sonos CR100) in Sonos's 2005 system did not have any functional capability for creating or invoking a "zone scene" – let alone the required functional capability to cause the creation of two different, overlapping "zone scenes" that are both available for selection by a user and then later cause a selected one of the two different "zone scenes" to be invoked, as required by Asserted Claim 1 of the '966 Patent.

498.   As an initial matter, the Sonos UI Specification for "Zone Scenes" establishes that Sonos controllers in Sonos's 2005 system did not have any functional capability for creating or invoking a "zone scene." . . .

503.   The "Sonos Digital Music System User Guide" dated April 2005 ("Sonos 2005 User Guide") also establishes that Sonos controllers in Sonos's 2005 system did not have any functional capability for creating or invoking a "zone scene." . . .

521.   I have also seen various other Sonos documents confirming that Sonos controllers in Sonos's 2005 system did not have any functional capability for creating or invoking a "zone scene." . . .

524.   Additionally, I have reviewed the "v1.2-gold" snapshot of Sonos's source code . . . and I did not see any source code modules that provided "zone scenes" capability . . . .

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Sonos's 2005 System Did Not Include the Claimed "Zone Scene" Technology
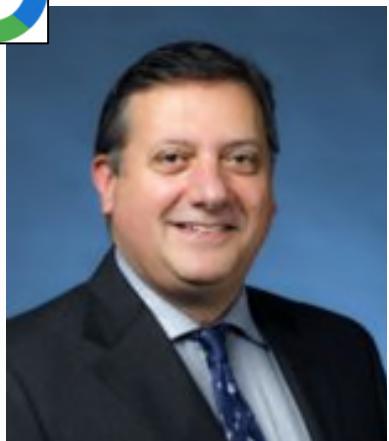
Google's Expert
Dr. Dan Schonfeld

*11/30/2022
Opening Report
at 442*

For example, the first Zone Player receives a SetAVTransportURI SOAP action with a Rincon group URI that meets the claimed "indication" and identifies the group to join (selected joinee group). However, the SetAVTransportURI message may be understood and/or it would have been obvious to parse that message into two separate messages: (a) a first message to notify zone players that they have joined a zone group and identify the group coordinator (meeting the indication limitations); and (b) a second message that provides the remote channel source (typically the group coordinator) and thus provides an instruction that results in synchronous playback (the present instruction limitation).

30

Sonos's 2005 System Did Not Include the Claimed "Zone Scene" Technology

Sonos's 2005 System

- A zone group is not a "zone scene"
  - Not a predefined, pre-saved group that can be invoked later on demand for synchronous playback

- SetAVTransportURI message is not an "indication that [a ZonePlayer] has been added to a [] zone scene" sent prior to the invocation of the "zone scene"

- Single SetAVTransportURI message cannot satisfy the separate claim requirements of (1) an "indication that [a ZonePlayer] has been added" to a "zone scene" and (2) an "instruction to operate in accordance with" a "zone scene"

- ZonePlayers do not "continu[e] to operate in the standalone mode" after being added to a zone group

- A ZonePlayer cannot be a member of multiple different zone groups at the same time

- The hard-coded "Party Mode" option was not created by a user "add[ing]" ZonePlayers to "Party Mode" at a "network device" in advance of "Party Mode" being "selected for invocation"

'885 Patent Claim 1 - Functional Limitations

[1.5] while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

[1.6] (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

[1.7] (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

[1.8] after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

[1.9] after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

[1.10] based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

Sonos's 2005 System Did Not Include the Claimed "Zone Scene" Technology

Sonos's 2005 System

- ➢ A zone group is not a "zone scene"
  - ▪ Not a predefined, pre-saved group that can be invoked later on demand for synchronous playback

- ➢ SetAVTransportURI message is not an "indication of" a "zone scene" sent prior to the invocation of the "zone scene"

- ➢ Single SetAVTransportURI message cannot satisfy the separate claim requirements of (1) "causing an indication of [a] zone scene to be transmitted" to a zone player and (2) "causing the zone player to transition from operating in the standalone mode to operating in accordance with" a "zone scene"

- ➢ A ZonePlayer cannot be a member of multiple different zone groups at the same time

- ➢ The hard-coded "Party Mode" option was not created based on a controller "receiving a [] request to create" the "Party Mode" option in advance of the controller "receiving a [] request to invoke" the "Party Mode" option

'966 Patent Claim 1 - Functional Limitations

[1.4] while serving as a controller for a networked media playback system comprising a first zone player and at least two other zone players, wherein the first zone player is operating in a standalone mode in which the first zone player is configured to play back media individually:

[1.5] receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked;

[1.6] based on the first request, i) causing creation of the first zone scene, ii) causing an indication of the first zone scene to be transmitted to the first zone player, and iii) causing storage of the first zone scene;

[1.7] receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different than the second zone player;

[1.8] based on the second request, i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene;

[1.9] displaying a representation of the first zone scene and a representation of the second zone scene; and

[1.10] while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene; and

[1.11] based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player.

Sonos Forums Do <u>Not</u> Disclose or Suggest the Claimed "Zone Scene" Technology

Sonos Forums	**'885 Patent Claim 1 - Functional Limitations**

[1.5] while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

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[1.10] based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

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Sonos Forums Do <u>Not</u> Disclose or Suggest the Claimed "Zone Scene" Technology

Sonos Forums

Virtual Zones and Zone Grouping

17 years ago · 190 replies · 45404 views

27 February 2005

T — theboyg Avid Contributor I · 22 replies

This "link/unlink" business is really cumbersome - and not a joy to use which goes against the ease of use of the rest of the system.

Why can't I have a virtual zone - ie a zone called "Downstairs" - and I can group all my downstairs zones into this. Then I dont have to keep manually linking/unlinking multiple zones everytime.

PLEASE !

G.

I — ievolve Contributor III · 130 replies   17 years ago

Common groupings as "virtual zones"... Great Idea!   28 February 2005

👍 Like   ❞ Quote

Macro / presets

16 years ago · 61 replies · 15122 views

22 September 2005

J — JeffT Trending Lyricist I · 20 replies

Just got the intro bundle, and I am impressed. I did a search and did not find this suggested, but I would save Zone links as favorites. With only 2 ZPs it is not a problem yet, but when I add more it maybe. I would like to setup say Morning mode for the units I want in the morning and a preset volume between the units. Another example I would have 2 party modes, Summer and Winter. The Summer mode would include the deck speakers and the Winter mode would not. Also it would be nice to have playlists or radio station associated with each mode. So when I get up I press Morning the DI Chill radio station plays.

Jeff

'966 Patent Claim 1 - Functional Limitations

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Jeff

➤ No disclosure of how to create or invoke a "zone scene"

➤ No disclosure of any "indication" of a "zone scene" being sent to a ZonePlayer at the time that ZonePlayer is added to the "zone scene"

➤ No disclosure that ZonePlayers "continu[e] to operate in the standalone mode" after being added to a "zone scene"

➤ No disclosure that a ZonePlayer can be added as a member of multiple different "zone scenes" at the same time

➤ No disclosure of an "instruction to operate in accordance with" a given previously-created "zone scene" being sent to a ZonePlayer that is operating in "standalone mode" but is a member of multiple "zone scenes"

➤ No disclosure of where or how a "zone scene" would be stored

35

Sonos Forums Do <u>Not</u> Disclose or Suggest the Claimed "Zone Scene" Technology

Sonos's Expert
Dr. Kevin Almeroth

*1/13/2023
Rebuttal Report
at ¶¶ 674-682
(Sonos Ex. K)*

*See also
7/27/2022
Rebuttal Report
at ¶¶ 422-430
(Sonos Ex. I)*

674. [E]ven if Sonos's 2005 system were to be modified and combined with the Sonos Forums reference in the manner proposed by Dr. Schonfeld, such a hypothetical system still would not achieve either the specific player-side "zone scenes" functionality required by Asserted Claim 1 of the '885 Patent or the specific controller-side "zone scenes" functionality required by Asserted Claim 1 of the '966 Patent that Dr. Schonfeld failed to analyze.

675. . . . Dr. Schonfeld never even goes on to explain how the foregoing posts from the Sonos Forums purportedly satisfy the specific player-side "zone scenes" functionality of Asserted Claim 1 of the '885 Patent – let alone the specific controller-side "zone scenes" functionality of Asserted Claim 1 of the '966 Patent – but regardless, I disagree that the foregoing posts disclose or suggest the controller-side "zone scenes" functionality of Asserted Claim 1 of the '966 Patent [for at least the reasons explained in paragraphs 676-680].

* * * *

682. Because the Sonos Forums reference fails to disclose or suggest a "computing device" that is programmed with the controller-side "zone scenes" functionality required by the Asserted Claims of the '966 Patent, even if a POSITA in 2005-06 were to modify Sonos's 2005 system to incorporate the discussion in the identified user posts from Sonos Forums, it is my opinion that a Sonos controller in such a modified Sonos system still would not have the "zone scenes" capability required by the Asserted Claims of the '966 Patent.

Sonos Forums Do <u>Not</u> Disclose or Suggest the Claimed "Zone Scene" Technology

Virtual Zones and Zone Grouping

17 years ago · 190 replies · 45480 views

27 February 2005

theboyg Avid Contributor I · 22 replies

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Macro / presets

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Jeff

From: Rob Lambourne
Sent: Monday, April 11, 2005 3:18 PM
To: Andrew Schulert
Subject: RE: Another UI idea - grouping/ungrouping zones

Andy,

If I get a chance this week or next, I'll go back to my thoughts on this and create a quick overview.

In terms of 'groupings', I think there are 2 approaches (which are not necessarily mutually exclusive).

1. Permanent Zone Groups. Allow a user to setup a group of Zones that might appear as one entity in the Zone Menu. This permanent linking would be done using a setup dialogue. Permanent groupings are for situations where it never makes sense to have different music playing in the Zones. For instance, in my house I never want to play different music in my Kitchen and Living Room because they are in an open-plan area (I do however, want to control the volumes separately) (I think this is what you also need)

2. Allow a user to save Zone Profiles (as requested by Tom and others). This would allow a user with one click to put their Zones into predefined groups (think Party-mode, but instead off linking all Zones, certain Zones get grouped. Tom has the experience that he ends most evenings in Party Mode - but most mornings, he wants to link all the 'living spaces', but ungroup the bedrooms (or words to that effect). Of course, the main problem with this is making the UI simple enough and dealing with the chances for many 'blown' queues. However, we're not getting much, if any, feedback that blown queues are so terrible.

- Examples of possible group profiles:
--"downstairs" (groups all downstairs rooms with one click)
--"upstairs" (groups all upstairs rooms with one click)
--"upstairs and downstairs" (puts upstairs zones in a group, and downstairs zones in another group)
--"mornings" (groups all living spaces and master bedroom, ungroups all bedrooms)
Etc etc.

I have some UI sketches, I'll put them in order and we can discuss further. I would also like to get some user feedback on the need for this. This is the kind of thing that's difficult to get real-life feedback about until people have lived with their products for a few months.

Rob

SONOS-SVG2-00026888

Sonos Forums Do <u>Not</u> Disclose or Suggest the Claimed "Zone Scene" Technology
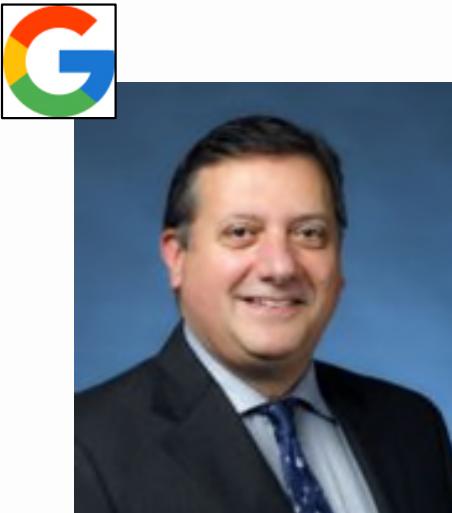
**Google's Expert
Dr. Dan Schonfeld**

*2/3/2023 Dep Tr.
at 122:19-130:1*

Q.   And so [SONOS-SVG2-00026888] is an April 11th, 2005 email from Rob Lambourne; correct?

A.   Yes, it is.

* * * *

Q.   [L]ooking at this email in view of Sonos's [2005] system, does this disclose the full scope of the zone scene inventions of the '885 … patent[]?

A.   [T]he answer is no …. [I]t is insufficient because I don't see overlapping zone groups, I don't see storage, I don't see operating in standalone mode and transitioning out of it.

* * * *

Q.   In your opinion does this email in combination with the Sonos 2005 system enable one of ordinary skill in the art to make and use the claimed zone scene technology?

A.   My instinctive reaction is similar, no, because those elements that are not mentioned at all are obviously not enabled. But those elements such as grouping together speakers into a single zone -- into a single group profile, I think that in my opinion would be enabled but that's not sufficient to meet -- I think in your question it was the claimed zone scene or the claimed zone group. That requires meeting each and every one of the limitations and I don't see that here . . . .

38

Google Cannot Show a Motivation to Combine

"[A] party seeking to invalidate a patent as obvious must demonstrate by clear and convincing evidence that a skilled artisan would have had reason to combine the teaching of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success from doing so."

In re Cyclobenzaprine Hydrochloride Extended–Release Capsule Pat. Litig., 676 F.3d 1063, 1068-69 (Fed. Cir. 2012) (citation omitted)

➤ Google cannot establish by clear and convincing evidence that a POSITA would have been motivated to modify Sonos's existing grouping technology in view of the Sonos Forum posts at all – let alone motivated to modify Sonos's existing grouping technology in order to specifically achieve the claimed invention

➤ There is various evidence showing that a POSITA would have been dissuaded from modifying Sonos's existing grouping technology as proposed by Google

- Sonos's existing grouping technology was being widely praised

- Ad-hoc groups provide certain advantages over "zone scenes"

- There was skepticism over whether it would be possible to implement predefined groups with overlapping members

Google Cannot Show a Motivation to Combine

SONOS

Sonos's Expert
Dr. Kevin Almeroth

*1/13/2023
Rebuttal Report
at ¶¶ 684-85
(Sonos Ex. K)*

*See also
7/27/2022
Rebuttal Report
at ¶¶ 432-433
(Sonos Ex. I)*

684. Fourth, I disagree that these two isolated Sonos Forum posts demonstrate that a POSITA in 2005-06 would have been motivated to replace Sonos's ad-hoc "zone group" functionality with the specific "zone scenes" functionality required by either Asserted Claim 1 of the '885 Patent or Asserted Claim 1 of the '966 Patent (which go well beyond what is discussed in the Sonos Forums posts), particularly in view of all of the other evidence showing that the existing ad-hoc "zone group" functionality of Sonos's 2005 system was being praised at the time, as well as the time, effort, and cost that would have been required to overhaul the grouping mechanism of Sonos's 2005 system.

685. I have also seen other Sonos Forum posts contradicting Dr. Schonfeld's theory that a POSITA would have been motivated to replace Sonos's ad-hoc "zone group" functionality with the claimed "zone scene" functionality in view of the identified user posts from the Sonos Forums. For instance, as explained above, I have seen other user posts from the Sonos Forums casting doubt as to how overlapping "zone scenes" would have worked in Sonos's system. For example, even after the claimed conception date, a post from "Majik" on April 18, 2006 suggests that there were concerns about potential "side-effects" if "zones [can] be allowed to be in more than one group." GOOG-SONOS-WDTX-INV-00015870 at 871. I have also seen evidence from other Sonos threads suggesting that, even in 2016, users thought overlapping "zone scenes" would have been "logically impossible" to implement in Sonos's system. SONOS-SVG2-00226916 at 916. Given this skepticism, it is my opinion that a POSITA would have been dissuaded from modifying Sonos's 2005 system in view of the identified user posts from the Sonos Forums.

40

Google Cannot Show a Motivation to Combine

Majik · 6113 replies   16 years ago

Agreed.

18 April 2006

The ease of lining/unlinking zones is also dependent on the number of zones you have. 2 or 3 zones isn't too much of an imposition, but I imagine 6 or more is quite painful.

Just imagine if you had the full 32 zones!

At the moment we have a single, pre-defined group, that being "All Zones". I would like to see this as the default, but with the ability to configure your own groups and to delete the "All zones" group (some may not want this).

This would help with people who are having trouble blasting their neighbours during 2am parties by accidentally selecting hottub/garden.

Now this brings an interesting question: should zones be allowed to be in more than one group? If this is allowed, are there any unwanted side-effects with this?

Personally I would be happy with a grouping that allowed zones to be in at most one group (and this might be the easiest to implement), but others may not.

Also, if zone groups were allowed, what "display options" would be useful for the Zones display. Off the top of my head I can see uses for:

* Hide all zones (only show groups)
* Sorting (by name or groups before zones)

These could be either by a user preference or by a toggle button on the zone screen.

Also, how would these be displayed on the other screens (e.g. now playing)... as groups or as individual zones? I suspect individual zones would be better, as this takes into account all circumstances of use.

Cheers,

Keith

GOOG-SONOS-WDTX-INV-00015871

jgatie · 23210 replies   6 years ago

Once again, it is logically impossible to have the same speakers in multiple groups. It's   8 January 2016
demonstrate:

Given speakers 1 2 3
Group A contains speakers 1 & 2
Group B contains speakers 2 & 3

If I play Led Zeppelin in Group A and Chopin in Group B, what is playing on speaker 2?

jgatie · 23215 replies   6 years ago

The Mekon wrote: 8 January 2016
Well that's easy - either just play on the speaker the most recent group selected, or throw an error when you try to play a group when that speaker is already in a different group that is playing. It doesn't really matter - it's not a situation that most people would configure, and so long as whatever method is consistent, who cares?

As a software developer, I care. I support creating permanent groups. I do not support the illogical concept of a speaker belonging to more than one group. It's stupid.

SONOS-SVG2-00226916-17

41

The Prior Art Does Not Enable the Claims

> "To render a claim obvious, the prior art, taken as a whole, must enable a skilled artisan to make and use the claimed invention."
>
> *Raytheon Techs. Corp. v. Gen. Elec. Co.*,
> 993 F.3d 1374, 1380-82 (Fed. Cir. 2021)

➢ Google's combination of Sonos's 2005 system + Sonos Forums fails to teach a POSITA how to implement the claimed "zone scene" technology

➢ Sonos Forums fail to provide any direction, guidance, or working examples of how to carry out the invention

- No guidance on how a "virtual zone" would be created
- No guidance on how or where to storage a "virtual zone"
- No guidance on how a "virtual zone" would be invoked

➢ Sonos Forums posts express a mere hope that Sonos would one day invent technology that allowed users to have "virtual zones" without providing

1/13/2023 Rebuttal Report at ¶¶ 684-685 (Sonos Ex. K)

7/27/2022 Rebuttal Report at ¶¶ 432-433 (Sonos Ex. I)

'885 Patent Claim 1 is Not Rendered Obvious By Sonos's 2005 System + Sonos Forums

'885 Claim 1	**Sonos System**	**Sonos Forums**
[1.0] A first zone player comprising . . . **[1.4]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:		
[1.5] while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:		
[1.6] (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and	✗	✗
[1.7] (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;	✗	✗
[1.8] after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;	✗	✗
[1.9] after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and	✗	✗
[1.10] based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.	✗	✗

43

'966 Patent Claims Are Not Rendered Obvious By Sonos's 2005 System + Sonos Forums

'966 Claim 1	Sonos System	Sonos Forums
[1.0] A computing device comprising . . . **[1.3]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the computing device to perform functions comprising:		
[1.4] while serving as a controller for a networked media playback system comprising a first zone player and at least two other zone players, wherein the first zone player is operating in a standalone mode in which the first zone player is configured to play back media individually:		
[1.5] receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked;	✗	✗
[1.6] based on the first request, i) causing creation of the first zone scene, ii) causing an indication of the first zone scene to be transmitted to the first zone player, and iii) causing storage of the first zone scene;	✗	✗
[1.7] receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different than the second zone player;	✗	✗
[1.8] based on the second request, i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene;	✗	✗
[1.9] displaying a representation of the first zone scene and a representation of the second zone scene; and	✗	✗
[1.10] while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene; and	✗	✗
[1.11] based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player.	✗	✗

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'966 Patent Claims Are Not Rendered Obvious By Sonos's 2005 System + Sonos Forums

'966 Claim 2	Sonos System	Sonos Forums
[2.0] The computing device of claim 1, further comprising program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the computing device to perform functions comprising:	✗	✗
[2.1] while the first zone player is configured to coordinate with at least the second zone player to play back media in synchrony with at least the second zone player, receiving a fourth request to invoke the second zone scene; and	✗	✗
[2.2] based on the fourth request, causing the first zone player to (a) cease to operate in accordance with the first predefined grouping of zone players such that the first zone player is no longer configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player and (b) begin to operate in accordance with the second predefined grouping of zone players such that the first zone player is configured to coordinate with at least the third zone player to output media in synchrony with output of media by at least the third zone player.	✗	✗

'966 Claim 4	Sonos System	Sonos Forums
[4.0] The computing device of claim [1],	✗	✗
[3.1] wherein causing storage of the first zone scene comprises causing storage of the first zone scene at a location other than the computing device, []	✗	✗
[3.2] wherein causing storage of the second zone scene comprises causing storage of the second zone scene at the location other than the computing device[, and]	✗	✗
[4.1] wherein the location other than the computing device comprises a zone player of the first predefined grouping of zone players.	✗	✗

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'966 Patent Claims Are Not Rendered Obvious By Sonos's 2005 System + Sonos Forums

'966 Claim 6

'966 Claim 6	Sonos System	Sonos Forums
[6.0] The computing device of claim 1,	X	X
[6.1] wherein the first predefined grouping of zone players does not include the third zone player, and	X	X
[6.2] wherein the second predefined grouping of zone players does not include the second zone player.	X	X

'966 Claim 8

'966 Claim 8	Sonos System	Sonos Forums
[8.0] The computing device of claim 1,	X	X
[8.1] wherein receiving the first request comprises receiving a first set of one or more inputs via a user interface of the computing device,	X	X
[8.2] wherein receiving the second request comprises receiving a second set of one or more inputs via the user interface, and	X	X
[8.3] wherein receiving the third request comprises receiving a third set of one or more inputs via the user interface.	X	X

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There is Objective Evidence of Non-Obviousness of the '885 and '966 Patents

SONOS

Sonos's Expert
Dr. Kevin Almeroth

*1/13/2023
Rebuttal Report
at ¶¶ 1607-1640
(Sonos Ex. K)*

*See also
7/27/2022
Rebuttal Report
at ¶¶ 966-999
(Sonos Ex. I)*

1607. Based on my review of Dr. Schonfeld's report and Sonos's Response to Google's Interrogatory Nos. 4 and 13, (which I hereby incorporate by reference), as well as my review of the evidence, it is my opinion that there exists ample evidence of secondary considerations that suggests that the Asserted Claims of the '966 Patent would not have been obvious to a POSITA at the time of their invention.

1612. As I explain below, I have seen evidence that Sonos's S2 products and Sonos's zone scene technology has received significant praise in this industry by journalists and others in the audio space since Sonos's release of this technology in 2020. Because Sonos's S2 products practice the Asserted Claims of the '966 Patent, and because the praise is directed to these S2 products as well as to the specific "zone scene" features within these S2 products, it is my opinion that the evidence of the secondary considerations of non-obviousness has a sufficient nexus to the Asserted Claims of the '966 Patent.

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There is Objective Evidence of Non-Obviousness of the '885 and '966 Patents
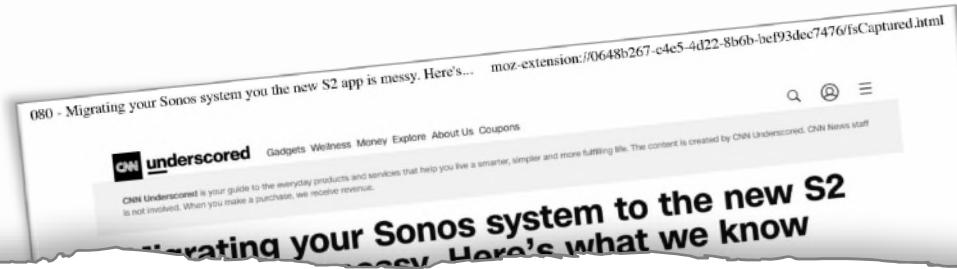
"By far the best feature of Sonos S2 is the ability to save a group of speakers as a preset. No longer will you need to constantly select which speaker you want to listen to each time. Save it as a group, and you're better off. It's really great…."

Sonos Ex. S at SONOS-SVG2-00062361

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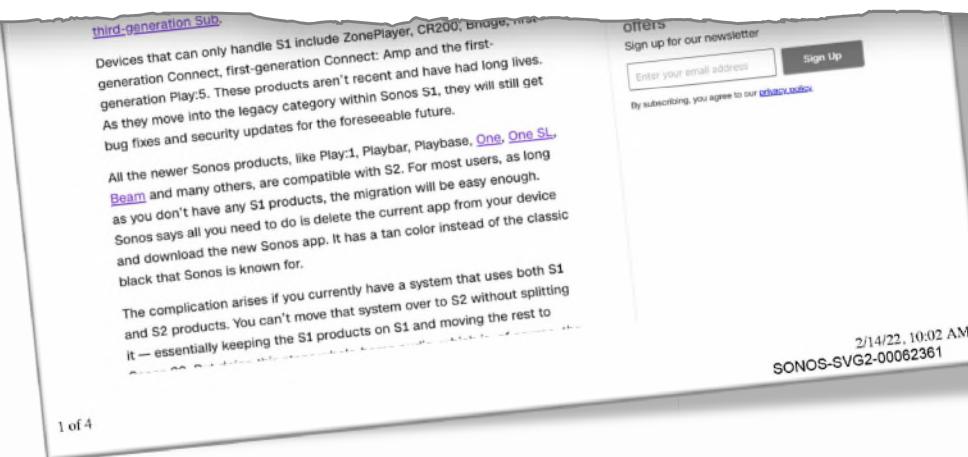
# There is Objective Evidence of Non-Obviousness of the '885 and '966 Patents

"Perhaps the most beneficial announced feature of the new platform, Room Groups promises to make our Sonos systems a little smarter about keeping certain sets of speakers linked…. Imagine having 'main floor' or 'upstairs' groups so you didn't have to set these each-and-every time, and you start to grok the convenience benefit here."

SONOS-SVG2-00062433 at 434

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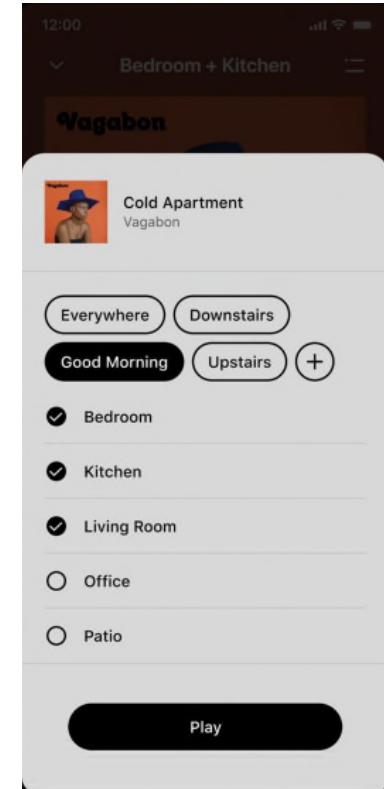
# There is Objective Evidence of Non-Obviousness of the '885 and '966 Patents
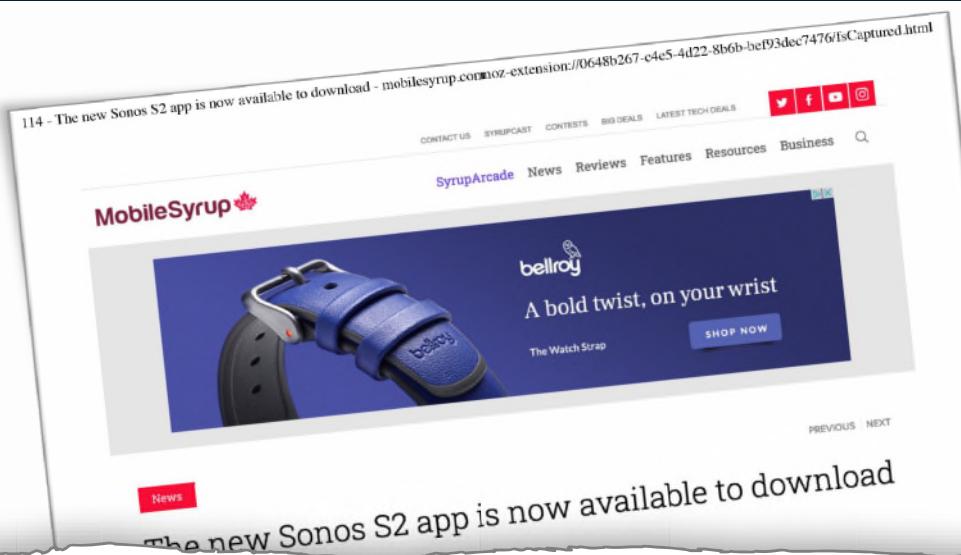
"You can even link speakers together into **pre-set groups** to set up a multi-room experience **much quicker**, which is **handy** if you have lots of speakers."

SONOS-SVG2-00062449 *at 449*
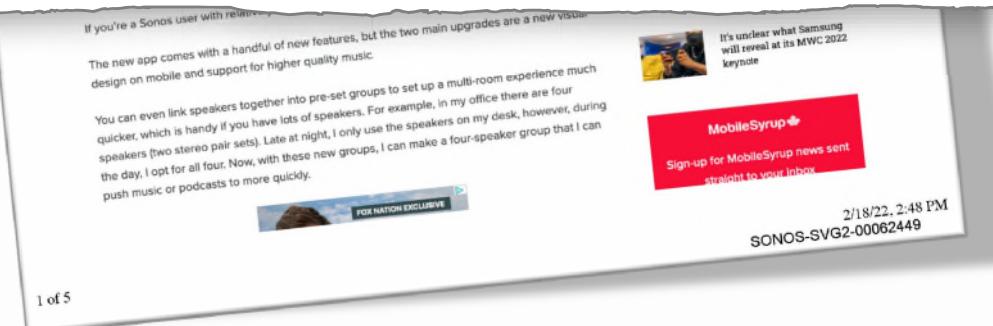
There is Objective Evidence of Non-Obviousness of the '885 and '966 Patents
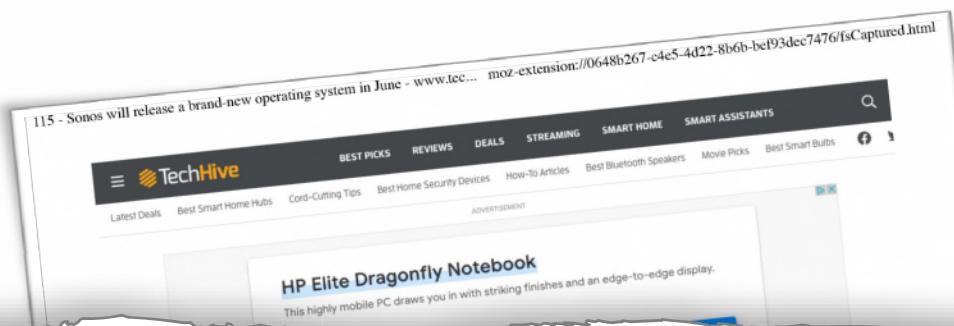
"[A] new feature called 'room groups,' … could be very useful … and will also remember frequently grouped speakers, such as 'Upstairs; 'Downstairs,' 'Front of House,' and 'Back of House,' so you don't need to repeatedly create those scenarios."

SONOS-SVG2-00062443 at 444

Sonos transitioning to a new operating system should come as no surprise. The first Sonos products came to market more than 15 years ago, and until now, almost every component has remained interoperable. That couldn't last forever. What *is* surprising for a company

2/18/22, 2:59 PM
SONOS-SVG2-00062443

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